



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

Firestone Building Products Company, LLC
250 West 96th Street
Indianapolis, IN 46260

**MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION**

11805 SW 26 Street, Room 208
Miami, Florida 33175-2474
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www.miamidade.gov/economy

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Firestone BASEGARD SA Modified Bitumen Roof Systems for Recover Decks.

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises NOA # 12-0508.04 and consists of pages 1 through 48.
The submitted documentation was reviewed by Alex Tigera.



NOA No.: 13-0425.04
Expiration Date: 02/14/18
Approval Date: 02/27/14
Page 1 of 48

ROOFING SYSTEM APPROVAL

<u>Category:</u>	Roofing
<u>Sub-Category:</u>	Modified
<u>Material:</u>	APP, SBS
<u>Deck Type:</u>	Recover
<u>Maximum Design Pressure</u>	See Specific Assemblies Herein

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
BASEGARD SA	39.4" x 65' 3"	ASTM D6163	Fiberglass reinforced SBS modified bitumen, self-adhering base sheet with a smooth sanded surface.
APP 180	39.4" x 32'10"	ASTM D6222	Polyester reinforced APP modified bitumen, granule surfaced membrane with burn off film.
APP 180 UltraWhite	39.4" x 32'10"	ASTM D6222	Polyester reinforced APP modified bitumen, UltraWhite, granule surfaced membrane with burn off film.
APP 180 FR	39.4" x 32'10"	ASTM D6222	Polyester reinforced, fire resistant APP modified bitumen, granule surfaced membrane with burn off film.
APP 180 FR UltraWhite	39.4" x 32'10"	ASTM D6222	Polyester reinforced, fire resistant APP modified bitumen, UltraWhite granule surfaced membrane with burn off film.
SBS Glass	39.4" x 33'6"	ASTM D6163	Fiberglass reinforced, SBS modified bitumen, granule surfaced membrane with sanded bottom surface.
SBS Glass Torch Base	39.4" x 33'6"	ASTM D6163	Fiberglass reinforced, SBS modified bitumen ply with sanded top surface and burn off film.
SBS Poly Torch Base	39.4" x 33'6"	ASTM D6164	Polyester reinforced, SBS modified bitumen ply with sanded top surface with burn off film.
SBS Torch	39.4" x 33'6"	ASTM D6164	Polyester reinforced, SBS modified bitumen membrane, granule surfaced with burn off film.
SBS Glass FR Torch	39.4" x 33'6"	ASTM D6163	Fiberglass reinforced, fire resistant, SBS modified bitumen membrane, granule surfaced with burn off film.
SBS Glass FR Torch UltraWhite	39.4" x 33'6"	ASTM D6163	Fiberglass reinforced, fire resistant, SBS modified bitumen membrane, UltraWhite granule surfaced with burn off film.
SBS Torch UltraWhite	39.4" x 33'6"	ASTM D6164	Polyester reinforced, SBS modified bitumen membrane, UltraWhite granule surfaced with burn off film.
SBS FR Torch	39.4" x 33'6"	ASTM D6164	Polyester reinforced, fire resistant, SBS modified

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
SBS FR Torch UltraWhite	39.4" x 33'6"	ASTM D6164	bitumen, granule surfaced with burn off film. Polyester reinforced, fire resistant, SBS modified bitumen membrane, UltraWhite granule surfaced with burn off film.
SBS Cap	39.4" x 33'6"	ASTM D6164	Polyester reinforced, SBS modified bitumen membrane, granule surfaced with sanded bottom surface.
SBS Cap UltraWhite	39.4" x 33'6"	ASTM D6164	Polyester reinforced, SBS modified bitumen membrane, UltraWhite granule surfaced with sanded bottom surface.
SBS FR Cap	39.4" x 33'6"	ASTM D6164	Polyester reinforced, fire resistant, SBS modified bitumen membrane, UltraWhite granule surfaced with sanded bottom surface.
SBS FR Cap UltraWhite	39.4" x 33'6"	ASTM D6164	Polyester reinforced, fire resistant, SBS modified bitumen membrane, UltraWhite granule surfaced with sanded bottom surface.
SBS Premium FR	39.4" x 33'6"	ASTM D6164	Polyester reinforced, fire resistant, SBS modified bitumen membrane, granule surfaced with sanded bottom surface.
SBS Premium FR UltraWhite	39.4" x 33'6"	ASTM D6164	Polyester reinforced, fire resistant, SBS modified bitumen membrane, UltraWhite granule surfaced with sanded bottom surface.
SBS Premium	39.4" x 33'6"	ASTM D6164	Polyester reinforced, SBS modified bitumen membrane, granule surfaced with sanded bottom surface.
SBS Premium Torch	39.4" x 33'6"	ASTM D6164	Polyester reinforced, SBS modified bitumen membrane, granule surfaced with burn off film.
SBS Premium Torch UltraWhite	39.4" x 33'6"	ASTM D6164	Polyester reinforced, SBS modified bitumen membrane, UltraWhite granule surfaced with burn off film.
SBS Premium FR Torch	39.4" x 33'6"	ASTM D6164	Polyester reinforced, fire resistant, SBS modified bitumen membrane, granule surfaced with burn off film.
SBS Premium FR Torch UltraWhite	39.4" x 33'6"	ASTM D6164	Polyester reinforced, fire resistant, SBS modified bitumen membrane, UltraWhite granule surfaced with burn off film.
I.S.O. Twin Pack Insulation Adhesive	750 ml cartridges	Proprietary	A two-component polyurethane insulation adhesive.
I.S.O. Fix II	30 lbs.	Proprietary	A single component polyurethane insulation adhesive.



TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:**TABLE 1**

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
I.S.O. Stick	5 gal.	Proprietary	A two-component polyurethane insulation adhesive.
SBS Base	39.4" x 50'	ASTM D6163	Fiberglass reinforced, SBS modified bitumen ply with sanded surfaces.
SBS Premium Base	39.4" x 50'	ASTM D6164	Fiberglass reinforced, SBS modified bitumen ply with sanded surfaces.
SBS Poly Base	39.4" x 50'	ASTM D6164	Polyester reinforced, SBS modified bitumen membrane with sanded surfaces.
SBS Smooth	39.4" x 33'6"	ASTM D6164	Polyester reinforced, SBS modified bitumen membrane with sanded surfaces.
SBS Glass FR	39.4" x 33'6"	ASTM D6163	Fiberglass reinforced, fire resistant, SBS modified bitumen membrane, granule surfaced with sanded bottom surface.
SBS Glass FR UltraWhite	39.4" x 33'6"	ASTM D6163	Fiberglass reinforced, fire resistant, SBS modified bitumen membrane, UltraWhite granule surfaced with sanded bottom surface.
Ply VI	39.4" x 160'6"	ASTM D 2178	Asphalt impregnated, glass fiber mat reinforced, roofing ply.
Ply IV	39.4" x 160'6"	ASTM D 2178	Asphalt impregnated, glass fiber mat reinforced, roofing ply.

APPROVED INSULATIONS:**TABLE 2**

<u>Product Name</u>	<u>Product Description</u>	<u>Manufacturer (With Current NOA)</u>
ISO 95+ GL and tapered	Polyisocyanurate insulation board	Firestone Building Products
ISOGARD HD Composite	Polyisocyanurate foam core laminated to ISOGARD HD board	Firestone Building Products
ISOGARD HD	High density polyisocyanurate roof board with a coated fiberglass facer	Firestone Building Products
RESISTA and tapered	Polyisocyanurate insulation board with fiberglass facer	Firestone Building Products
DensDeck, DensDeck Prime	Silicon treated gypsum	Georgia-Pacific Gypsum LLC
SECUROCK Gypsum-Fiber Roof Board	Gypsum roof board with fiber reinforcement	United States Gypsum



APPROVED FASTENERS:

TABLE 3

<u>Fastener Number</u>	<u>Product Name</u>	<u>Product Description</u>	<u>Dimensions</u>	<u>Manufacturer (With Current NOA)</u>
1.	Firestone Heavy-Duty	Insulation and membrane fastener	Various	Firestone Building Products
2.	Firestone Concrete Drive	1/4" diameter concrete deck fastener.	Various	Firestone Building Products
3.	Firestone Insulation Fastening Plate	Insulation plate for use with Firestone Fasteners	3" round	Firestone Building Products
4.	Firestone All-Purpose	Insulation and membrane fastener for the attachment of roofing insulation and base sheets	Various	Firestone Building Products
5.	Coiled Metal Batten Strip	Galvalume batten strip	220' coil	Firestone Building Products

EVIDENCE SUBMITTED:

<u>Test Agency</u>	<u>Test Identifier</u>	<u>Description</u>	<u>Date</u>
Factory Mutual Research Corp.	3044812	FM 4470	05/04/12
	3014537	FM 4470	11/29/04
	3020395	FM 4470	06/07/10
	3035017	FM 4470	04/15/09
	3035560	FM 4470	01/11/10
	3038197	FM 4470	08/04/11
	3040795	FM 4470	03/24/11
	3042665	FM 4470	05/04/12
	3040109	FM 4470	03/09/11
	3044047	FM 4470	05/17/12
	3047398	FM 4470	08/15/13
Underwriters Laboratories	R9516/11NK04032	UL 790	11/18/11
Trinity ERD	F8800.01.08-R1	ASTM D903/TAS114	01/17/08
	F36650.08.11-1-R2	ASTM D6163	05/08/12
	F36650.09.12	ASTM D4601/ASTM D2178	09/04/12
	F31960.05.10-1	ASTM D4977	05/19/10
	F41070.08.12	ASTM D6222	08/24/12
	F31960.08.10-1	ASTM D4977	08/25/10
PRI Construction Materials Technologies, LLC	FBP-018-02-01	ASTM D6163	09/07/04
	FBP-038-02-02	ASTM D6164	01/12/11
	FBP-038-02-03	ASTM D6164	01/12/11
	FBP-038-02-04	ASTM D6164	01/12/11
	FBP-042-02-02	ASTM D 6164	07/27/11
	FBP-042-02-01	ASTM D6164	07/26/11
	FBP-043-02-01	ASTM D6164	08/02/11
	FBP-043-02-02	ASTM D6164	08/02/11
	FBP-043-02-04	ASTM D6164	07/26/11
	FBP-042-02-02	ASTM D6164	07/26/11
	FBP-043-02-03	ASTM D6164	07/26/11
	FBP-053-02-01	ASTM D6163	03/23/12
	FBP-071-02-01 Rev.1	TAS 114-J	02/07/13
	FBP-059-02-01	ASTM D1876	07/20/12
	FBP-059-02-01 Rev 2	ASTM D903/D1876	09/30/13
		TAS 117/TAS 114	
	FBP-104-02-01 Rev.1	TAS 114	06/19/13
	FBP-106-02-01	TAS 114	04/19/13
	FBP-113-02-01	TAS 114	04/17/13
	FBP-114-02-01	TAS 114	04/19/13
	FBP-118-02-01	TAS 114	07/24/13
	FBP-124-02-01	TAS 114	08/02/13
	FBP-133-02-01 Rev 3	TAS 114	08/24/13
	FBP-133-02-02	TAS 114	08/27/13
	FBP-141-02-01	TAS 114	12/18/13

EVIDENCE SUBMITTED:

Test Agency

Test Identifier

Description

Date

FBP-142-02-01
FBP-142-02-02 Rev 1

TAS 114
TAS 114

08/28/13
10/01/13

APPROVED ASSEMBLIES

Membrane Type:	SPP/APP
Deck Type 7I:	Recover, Insulated
Deck Description:	Concrete
System Type A(1):	Insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply.

One or more layers of any of the following insulations.

<u>Insulation Layer</u>	<u>Insulation Fasteners</u> <u>(Table 3)</u>	<u>Fastener</u> <u>Density/ft²</u>
ISO 95+GL Minimum 1½" thick	N/A	N/A

Note: All Insulations shall be adhered using I.S.O. Fix II, applied in ¾" wide ribbons spaced 8" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet:	One ply of BASEGARD SA, self-adhered with a 3" lap.
Ply Sheet:	(Optional) One or more plies of Ply IV, Ply VI, SBS Poly Base, SBS Smooth, SBS Base, or SBS Premium Base with hot asphalt adhesive applied within the EVT range and at a rate of 20-40 lbs./sq. with a 3" lap. or One or more plies of SBS Glass Torch Base or SBS Poly Torch Base heat welded with a 3" lap.
Membrane:	One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite, APP 180, APP 180 UltraWhite, APP 180 FR or APP 180 FR UltraWhite cap sheet torch adhered to the base sheet with a 3" lap. Or One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR or SBS Premium FR UltraWhite cap sheet fully adhered to the base sheet with hot asphalt adhesive applied within the EVT range and at a rate of 20-40 lbs./sq. with a 3" lap.
Maximum Design Pressure:	-45 psf. (See General Limitation #9)



Membrane Type: SPP/APP
Deck Type 7I: Recover, Insulated
Deck Description: Concrete
System Type A(2): Insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply.

One or more layers of any of the following insulations.

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISO 95+GL Minimum 1½” thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISO 95+GL (tapered) Minimum ½” thick with a ¼” taper	N/A	N/A

Note: All Insulations shall be adhered using I.S.O. Fix II, applied in ¾” wide ribbons spaced 8” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of BASEGARD SA, self-adhered with a 3” lap.

Ply Sheet: (Optional) One or more plies of Ply IV, Ply VI, SBS Poly Base, SBS Smooth, SBS Base, or SBS Premium Base with hot asphalt adhesive applied within the EVT range and at a rate of 20-40 lbs./sq. with a 3” lap.
or
One or more plies of SBS Glass Torch Base or SBS Poly Torch Base heat welded with a 3” lap.

Membrane: One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite, APP 180, APP 180 UltraWhite, APP 180 FR or APP 180 FR UltraWhite cap sheet torch adhered to the base sheet with a 3” lap.
Or
One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR or SBS Premium FR UltraWhite cap sheet fully adhered to the base sheet with hot asphalt adhesive applied within the EVT range and at a rate of 20-40 lbs./sq. with a 3” lap.

Maximum Design Pressure: -45 psf. (See General Limitation #9)



Membrane Type: SPP/APP
Deck Type 7I: Recover, Insulated
Deck Description: Concrete
System Type A(3): Insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply.

One or more layers of any of the following insulations.

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISO 95+GL Minimum 1½” thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
Tapered ISO 95+GL Minimum ½” thick with a ¼” taper	N/A	N/A

Note: All Insulations shall be adhered using I.S.O. Twin Pack Insulation Adhesive applied in continuous ½” to ¾” wide ribbons spaced 12” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of Firestone BASEGARD SA, self-adhered with a 3” lap.

Ply Sheet: (Optional) One or more plies of Ply IV, Ply VI, SBS Poly Base, SBS Smooth, SBS Base, or SBS Premium Base with hot asphalt adhesive applied within the EVT range and at a rate of 20-40 lbs./sq. with a 3” lap.
or
One or more plies of SBS Glass Torch Base or SBS Poly Torch Base heat welded with a 3” lap.

Membrane: One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite, APP 180, APP 180 UltraWhite, APP 180 FR or APP 180 FR UltraWhite cap sheet torch adhered to the base sheet with a 3” lap.
Or
One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR or SBS Premium FR UltraWhite cap sheet fully adhered to the base sheet with hot asphalt adhesive applied within the EVT range and at a rate of 20-40 lbs./sq. with a 3” lap.

Maximum Design Pressure: -112.5 psf. (See General Limitation #9)



Membrane Type: SBS/APP
Deck Type 7I: Recover, Insulated
Deck Description: Concrete
System Type B(1): Thermal Barrier mechanically fastened. Insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply.

<u>Thermal Barrier:</u>	<u>Insulation Fasteners</u> <u>(Table 3)</u>	<u>Fastener</u> <u>Density/ft²</u>
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ½” thick	1 or 2 with 3	1:2 ft ²

Note: Thermal Barrier shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

One or more layers of any of the following insulations.

<u>Base Insulation Layer</u>	<u>Insulation Fasteners</u> <u>(Table 3)</u>	<u>Fastener</u> <u>Density/ft²</u>
ISO 95+GL Minimum 1½” thick	N/A	N/A

<u>(Optional) Middle Insulation Layer</u>	<u>Insulation Fasteners</u> <u>(Table 3)</u>	<u>Fastener</u> <u>Density/ft²</u>
ISO 95+GL Minimum 1½” thick	N/A	N/A

<u>Top Insulation Layer</u>	<u>Insulation Fasteners</u> <u>(Table 3)</u>	<u>Fastener</u> <u>Density/ft²</u>
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ¼” thick	N/A	N/A

Note: All Insulations shall be adhered to the thermal barrier using I.S.O Twin Pack Insulation Adhesive, applied ½” to ¾” wide ribbons spaced 12” o.c. or I.S.O. Fix II or I.S.O. Stick applied in continuous ¾” to 1” wide ribbons spaced 12” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of BASEGARD SA, self-adhered with a 3” lap.



- Ply Sheet:** (Optional) One or more plies of Ply IV, Ply VI, SBS Poly Base, SBS Smooth, SBS Base, or SBS Premium Base with hot asphalt adhesive applied within the EVT range and at a rate of 20-40 lbs./sq. with a 3” lap.
or
One or more plies of SBS Glass Torch Base or SBS Poly Torch Base heat welded with a 3” lap.
- Membrane:** One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite, APP 180, APP 180 UltraWhite, APP 180 FR or APP 180 FR UltraWhite cap sheet torch adhered to the base sheet with a 3” lap.
Or
One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR or SBS Premium FR UltraWhite cap sheet fully adhered to the base sheet with hot asphalt adhesive applied within the EVT range and at a rate of 20-40 lbs./sq. with a 3” lap.
- Maximum Design Pressure:** -45 psf. (See General Limitation #9)

Membrane Type: SBS
Deck Type 7I: Recover, Insulated
Deck Description: Concrete
System Type B(2): Base layer of insulation mechanically attached; membrane fully adhered.

All General and System Limitations apply.

One or more layers of any of the following insulations.

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISO 95+ GL, RESISTA Minimum 2" thick	1 or 2 with 3	1:1 ft ²

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	N/A	N/A

Note: Top layer of insulation shall be adhered with I.S.O. Twin Pack Insulation Adhesive applied in ½" to ¾" wide ribbons spaced 4" o.c. or with I.S.O. Fix II or I.S.O. Stick applied in ¾" to 1" wide ribbons spaced 4" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet: One ply of BASEGARD SA, self-adhered with a 3½" lap.

Ply Sheet: (Optional) One or more plies of Ply IV, Ply VI, SBS Poly Base, SBS Smooth, SBS Base, or SBS Premium Base with hot asphalt adhesive applied within the EVT range and at a rate of 20-40 lbs./sq. with a 3½" lap.
or
One or more plies of SBS Glass Torch Base or SBS Poly Torch Base heat welded with a 3½" lap.



Membrane:

One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite, APP 180, APP 180 UltraWhite, APP 180 FR or APP 180 FR UltraWhite cap sheet torch adhered to the base sheet with a 3½" lap.

Or

One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR or SBS Premium FR UltraWhite cap sheet fully adhered to the base sheet with hot asphalt adhesive applied within the EVT range and at a rate of 20-40 lbs./sq. with a 3½" lap.

**Maximum Design
Pressure:**

-67.5 psf. (See General Limitation #7)



Membrane Type: SBS
Deck Type 7I: Recover, Insulated
Deck Description: Concrete
System Type B(3): Base layer of insulation mechanically attached, top layer adhered with approved adhesive.

All General and System Limitations apply.

One or more layers of any of the following insulations.

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISO 95+ GL, RESISTA Minimum 2" thick	1 or 2 with 3	1:1 ft ²

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISOGARD HD Minimum ½" thick	N/A	N/A

Note: Top layer of insulation shall be adhered with I.S.O. Twin Pack Insulation Adhesive applied in ½" to ¾" wide ribbons spaced 4" o.c. or with I.S.O. Fix II or I.S.O. Stick applied in ¾" to 1" wide ribbons spaced 4" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet: One ply of Firestone BASEGARD SA, self-adhered with a 3½" lap.

Ply Sheet: (Optional) One or more plies of Ply IV, Ply VI, SBS Poly Base, SBS Smooth, SBS Base, or SBS Premium Base with hot asphalt adhesive applied within the EVT range and at a rate of 20-40 lbs./sq. with a 3½" lap.
or
One or more plies of SBS Glass Torch Base or SBS Poly Torch Base heat welded with a 3½" lap.



Membrane: One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite, APP 180, APP 180 UltraWhite, APP 180 FR or APP 180 FR UltraWhite cap sheet torch adhered to the base sheet with a 3½” lap.

Or

One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR or SBS Premium FR UltraWhite cap sheet fully adhered to the base sheet with hot asphalt adhesive applied within the EVT range and at a rate of 20-40 lbs./sq. with a 3½” lap.

**Maximum Design
Pressure:**

-105.0 psf. (See General Limitation #7)



Membrane Type:	SBS
Deck Type 7I:	Recover, Insulated
Deck Description:	Min. 22 ga. steel deck with supports at a maximum 6ft o.c. or concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 168 lbf when tested with Firestone All-Purpose fasteners in accordance with TAS 105.
System Type B(4):	Base layer of insulation mechanically attached, top layer adhered with approved adhesive. Membrane fully adhered.

All General and System Limitations apply.

One or more layers of any of the following insulations.

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISO 95+GL, RESISTA Minimum 1½” thick	4 (Steel) with 3 1or 2 (Concrete) with 3	1:1.6 ft ²

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ½” thick	N/A	N/A

Note: Top layer of insulation shall be adhered with I.S.O. Twin Pack Insulation Adhesive applied in ½” to ¾” wide ribbons spaced 6” o.c. (not with SECUROCK) or with I.S.O. Fix II or I.S.O. Stick applied in ¾” to 1” wide ribbons spaced 6” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet:	One ply of BASEGARD SA, self-adhered while maintaining minimum 3” side laps.
Ply Sheet:	(Optional) One or more plies of SBS Base, Ply IV, Ply VI, SBS Poly Base, SBS Smooth or SBS Premium Base fully adhered with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq. while maintaining minimum ¾” side laps. Or One or more plies of SBS Glass Torch Base or SBS Poly Torch Base heat welded. while maintaining minimum ¾” side laps.



Membrane: One ply of SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Cap, SBS Cap UltraWhite, SBS Premium, SBS Premium FR, or SBS Premium FR UltraWhite fully bonded with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq. while maintaining minimum 3¼" side laps.
Or
One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite SBS Premium FR Torch, SBS Premium FR Torch UltraWhite heat welded while maintaining minimum 3¼" side laps.

Maximum Design Pressure: -52.5 psf. (See General Limitation #7)



Membrane Type:	SBS
Deck Type 7I:	Recover, Insulated
Deck Description:	Min. 22 ga. steel deck with supports at a maximum 6ft o.c. or concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 240 lbf when tested with Firestone All-Purpose fasteners in accordance with TAS 105.
System Type B(5):	Base layer of insulation mechanically attached, top layer adhered with approved adhesive. Membrane fully adhered.

All General and System Limitations apply.

One or more layers of any of the following insulations.

<u>Base Insulation Layer (Optional)</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISO 95+GL Minimum 2" thick	4 (Steel) with 3 1 or 2 (Concrete) with 3	1:1.6 ft ²

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

<u>Middle Insulation Layer (Optional)</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISO 95+GL Minimum ½" thick	N/A	N/A

<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	N/A	N/A

Note: Top insulation layers shall be adhered with I.S.O. Twin Pack Insulation Adhesive applied in ½" to ¾" wide ribbons spaced 6" o.c. (not with SECUROCK) or with I.S.O. Fix II or I.S.O. Stick applied in ¾" to 1" wide ribbons spaced 6" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet:	One ply of BASEGARD SA, self-adhered while maintaining minimum 3" side laps.
Ply Sheet:	(Optional) One or more plies of SBS Base, Ply IV, Ply VI, SBS Poly Base, SBS Smooth or SBS Premium Base fully adhered with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq. while maintaining minimum 3" side laps Or One or more plies of SBS Glass Torch Base or SBS Poly Torch Base heat welded. while maintaining minimum 3" side laps.



Membrane: One ply of SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Cap, SBS Cap UltraWhite, SBS Premium, SBS Premium FR, or SBS Premium FR UltraWhite fully bonded with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq. while maintaining minimum 3” side laps.
Or
One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite SBS Premium FR Torch, SBS Premium FR Torch UltraWhite while maintaining 3” side laps.

Maximum Design Pressure: -67.5 psf. (See General Limitation #7)

Membrane Type: SBS/APP
Deck Type 7I: Recover, Insulated
Deck Description: Steel, Concrete
System Type C(1): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISO 95+GL, RESISTA Maximum: 1" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISOGARD HD, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Maximum: 1" thick	1 or 4 (Steel) with 3 1 or 2 (Concrete) with 3	1:2.7 ft ²

Note: Top Layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: One ply of BASEGARD SA, self-adhered with a 3" lap.

Ply Sheet: (Optional) One more plies of SBS Base, Ply IV, Ply VI, SBS Poly Base, SBS Smooth or SBS Premium Base fully adhered with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq. while maintaining minimum 3" side laps.
 Or
 One or more plies of SBS Glass Torch Base or SBS Poly Torch Base heat welded while maintaining minimum 3" side laps.

Membrane: One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite, APP 180, APP 180 UltraWhite, APP 180 FR or APP 180 FR UltraWhite cap sheet torch adhered to the base sheet with a 3" lap.
 Or
 One ply of Firestone SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR or SBS Premium FR UltraWhite cap sheet fully adhered to the base sheet with hot asphalt adhesive applied within the EVT range and at a rate of 20-40 lbs./sq. with a 3" lap

Maximum Design Pressure: -45 psf. (See General Limitation #9)



Membrane Type: SBS/APP
Deck Type 7I: Recover, Insulated
Deck Description: Concrete
System Type C(2): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

<u>Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISO 95+ GL, ISOGARD HD Composite, RESISTA Minimum 1½" thick	1 or 2 with 3	1:2 ft ²
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	1 or 2 with 3	1:2 ft ²

Note: Insulation shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: One ply of BASEGARD SA, self-adhered with a 3" lap.

Ply Sheet: (Optional) One more plies of SBS Base, Ply IV, Ply VI, SBS Poly Base, SBS Smooth or SBS Premium Base fully adhered with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq. while maintaining minimum 3" side laps.
Or
One or more plies of SBS Glass Torch Base or SBS Poly Torch Base heat welded while maintaining minimum 3" side laps.

Membrane: One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite, APP 180, APP 180 UltraWhite, APP 180 FR or APP 180 FR UltraWhitecap sheet torch adhered to the base sheet with a 3" lap.
Or
One ply of Firestone SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR or SBS Premium FR UltraWhite cap sheet fully adhered to the base sheet with hot asphalt adhesive applied within the EVT range and at a rate of 20-40 lbs./sq. with a 3" lap.

Maximum Design Pressure: -45 psf. (See General Limitation #9)



Membrane Type: SBS/APP
Deck Type 7I: Recover, Insulated
Deck Description: Concrete
System Type C(3): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

<u>Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISO 95+ GL, ISOGARD HD Composite, RESISTA Minimum 1½" thick	1 or 2 with 3	1:2.67 ft ²
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	1 or 2 with 3	1:2.67 ft ²

Note: Insulation shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: One ply of BASEGARD SA, self-adhered with a 3" lap.

Ply Sheet: (Optional) One more plies of SBS Base, Ply IV, Ply VI, SBS Poly Base, SBS Smooth or SBS Premium Base fully adhered with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq. while maintaining minimum 3" side laps.
Or
One or more plies of SBS Glass Torch Base or SBS Poly Torch Base heat welded while maintaining minimum 3" side laps.

Membrane: One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite, APP 180, APP 180 UltraWhite, APP 180 FR or APP 180 FR UltraWhite cap sheet torch adhered to the base sheet with a 3" lap.
Or
One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR or SBS Premium FR UltraWhite cap sheet fully adhered to the base sheet with hot asphalt adhesive applied within the EVT range and at a rate of 20-40 lbs./sq. with a 3" lap.

Maximum Design Pressure: -45 psf. (See General Limitation #9)



Membrane Type: SBS/APP
Deck Type 7I: Recover, Insulated
Deck Description: Concrete
System Type C(4): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

<u>Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISO 95+ GL Minimum 2.0" thick	1 or 2 with 3	1:4 ft ²
ISOGARD HD Composite Minimum 1½" thick	1 or 2 with 3	1:4 ft ²
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	1 or 2 with 3	1:4 ft ²

Note: Insulation shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: One ply of BASEGARD SA, self-adhered with a 3" lap.

Ply Sheet: (Optional) One more plies of SBS Base, Ply IV, Ply VI, SBS Poly Base, SBS Smooth or SBS Premium Base fully adhered with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq. while maintaining minimum 3" side laps.
Or
One or more plies of SBS Glass Torch Base or SBS Poly Torch Base heat welded while maintaining minimum 3" side laps.

Membrane: One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite, APP 180, APP 180 UltraWhite, APP 180 FR or APP 180 FR UltraWhite cap sheet torch adhered to the base sheet with a 3" lap.
Or
One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR or SBS Premium FR UltraWhite cap sheet fully adhered to the base sheet with hot asphalt adhesive applied within the EVT range and at a rate of 20-40 lbs./sq. with a 3" lap.

Maximum Design Pressure: -45 psf. (See General Limitation #9)



Membrane Type: SBS/APP
Deck Type 7I: Recover, Insulated
Deck Description: Concrete
System Type C(5): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

<u>Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
RESISTA Minimum 1½" thick	1 or 2 with 3	1:2.7 ft ²
SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	1 or 2 with 3	1:2.67 ft ²

Note: Insulation shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: One ply of BASEGARD SA, self-adhered with a 3" lap.

Ply Sheet: (Optional) One or more plies of SBS Base, Ply IV, Ply VI, SBS Poly Base, SBS Smooth or SBS Premium Base fully adhered with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq. while maintaining minimum 3" side laps.
Or
One or more plies of SBS Glass Torch Base or SBS Poly Torch Base heat welded while maintaining minimum 3" side laps.

Membrane: One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite, APP 180, APP 180 UltraWhite, APP 180 FR or APP 180 FR UltraWhite cap sheet torch adhered to the base sheet with a 3" lap.
Or
One ply of Firestone SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR or SBS Premium FR UltraWhite cap sheet fully adhered to the base sheet with hot asphalt adhesive applied within the EVT range and at a rate of 20-40 lbs./sq. with a 3" lap.

Maximum Design Pressure: -45 psf. (See General Limitation #9)



Membrane Type: SBS

Deck Type 7I: Recover, Insulated

Deck Description: Lightweight Concrete

System Type C(6): Membrane fully adhered over mechanically fastened insulation.

Deck: Minimum 3” of minimum 300 psi cellular lightweight insulating concrete; having a Minimum Characteristic Resistance Force (MCRF) pull out value of 214 lbf. when tested with a Firestone All-Purpose Fastener installed through the LWC to the steel deck (per TAS 105 Withdrawl Testing). LWC is installed over structural concrete deck or 18-22 ga. (33 ksi) steel deck with supports at a maximum spacing of 5 ft. o.c..

All General and System Limitations apply.

<u>Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISO 95+GL, RESISTA Minimum 2.0” thick	3 with 4	1:1.78 ft ²
ISOGARD HD Composite Minimum 1½” thick	3 with 4	1:1.78 ft ²
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ½” thick	3 with 4	1:1.78 ft ²

Note: Insulation shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: One ply of BASEGARD SA, self-adhered with a 3” lap.

Ply Sheet: (Optional) One or more plies of SBS Base, Ply IV, Ply VI, SBS Poly Base, SBS Smooth or SBS Premium Base fully adhered with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq. while maintaining minimum 3” side laps.

Or

One or more plies of SBS Glass Torch Base or SBS Poly Torch Base heat welded while maintaining minimum 3” side laps.

Membrane: One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite, torch-adhered with a 3" lap.

Or

One ply of SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR or SBS Premium FR UltraWhite cap sheet fully adhered to the base sheet with hot asphalt adhesive applied within the EVT range and a rate of 20-40 lbs./sq. with a 3" lap.

Maximum Design Pressure: -60 psf. (See General Limitation#7)

Membrane Type: SBS/APP

Deck Type 7I: Recover, Insulated

Deck Description: Min. 22 ga. steel deck with supports at a maximum 6ft o.c. or concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 267 lbf when tested with Firestone All-Purpose fasteners in accordance with TAS 105.

System Type C(7): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

<u>Base or Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISOGARD HD Composite Minimum 1.5" thick	4 (Steel) with 3 1 or 2 (Concrete) with 3	1:78 ft ²

Note: All Insulation shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: One ply of BASEGARD SA, self-adhered while maintaining minimum 3" side laps.

Ply Sheet: (Optional) One or more plies of SBS Base, Ply IV, Ply VI, SBS Poly Base, SBS Smooth or SBS Premium Base fully adhered with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq. while maintaining minimum 3" side laps.
Or
One or more plies of SBS Glass Torch Base or SBS Poly Torch Base heat welded while maintaining minimum 3" side laps.

Membrane: One ply of SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Cap, SBS Cap UltraWhite, SBS Premium, SBS Premium FR, or SBS Premium FR UltraWhite fully bonded with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq. while maintaining minimum 3" side laps.
Or
One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite SBS Premium FR Torch, SBS Premium FR Torch UltraWhite while maintaining 3" side laps.

Maximum Design Pressure: -75 psf. (See General Limitation #7)



Membrane Type: SBS

Deck Type 7I: Recover, Insulated

Deck Description: Min. 22 ga. steel deck with supports at a maximum 6ft o.c. or concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 216 lbf when tested with Firestone All-Purpose fasteners in accordance with TAS 105.

System Type C(8): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

<u>Base Insulation Layer (Optional)</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISO 95+GL, RESISTA Minimum 0½” thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ½” thick	4 (Steel) with 3 1or 2 (Concrete) with 3	1:1.6 ft ²
RESISTA Minimum: 1” thick	4 (Steel) with 3 1or 2 (Concrete) with 3	1:1.6 ft ²

Note: Top Layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: One ply of BASEGARD SA, self-adhered while maintaining minimum 3” side laps.

Ply Sheet: (Optional) One or more plies of SBS Base, Ply IV, Ply VI, SBS Poly Base, SBS Smooth or SBS Premium Base fully adhered with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq. while maintaining minimum 3” side laps.
Or
One or more plies of SBS Glass Torch Base or SBS Poly Torch Base heat welded while maintaining minimum 3” side laps.

Membrane: One ply of SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Cap, SBS Cap UltraWhite, SBS Premium, SBS Premium FR, or SBS Premium FR UltraWhite fully bonded with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq. while maintaining minimum 3” side laps.
Or
One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite SBS Premium FR Torch, SBS Premium FR Torch UltraWhite while maintaining 3” side laps.

Maximum Design Pressure: -67.5 psf. (See General Limitation #7)

Membrane Type: SBS

Deck Type 7I: Recover, Insulated

Deck Description: Min. 22 ga. steel deck with supports at a maximum 6ft o.c. or concrete. Existing roof shall be a minimum 1" in total thickness. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 267 lbf when tested with Firestone All-Purpose fasteners in accordance with TAS 105.

System Type C(9): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

<u>Base Insulation Layer (Optional)</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISO 95+GL, RESISTA Minimum ½" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	4 (Steel) with 3 1or 2 (Concrete) with 3	1:1.78 ft ²

Note: Top Layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: One ply of BASEGARD SA, self-adhered while maintaining minimum 3" side laps.

Ply Sheet: (Optional) One or more plies of SBS Base, Ply IV, Ply VI, SBS Poly Base, SBS Smooth or SBS Premium Base fully adhered with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq. while maintaining minimum 3" side laps.
Or
One or more plies of SBS Glass Torch Base or SBS Poly Torch Base heat welded while maintaining minimum 3" side laps.



Membrane: One ply of SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Cap, SBS Cap UltraWhite, SBS Premium, SBS Premium FR, or SBS Premium FR UltraWhite fully bonded with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq. while maintaining minimum 3” side laps.

Or

One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite SBS Premium FR Torch, SBS Premium FR Torch UltraWhite while maintaining 3” side laps.

**Maximum Design
Pressure:**

-75 psf. (See General Limitation #7)



Membrane Type: SBS

Deck Type 7I: Recover, Insulated

Deck Description: Min. 22 ga. steel deck with supports at a maximum 6ft o.c. or concrete. Existing roof shall be a minimum 2" in total thickness. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 200 lbf when tested with Firestone All-Purpose fasteners in accordance with TAS 105.

System Type C(10): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

<u>Base Insulation Layer (Optional)</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISO 95+GL, RESISTA Minimum ½" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
Dens Deck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	4 (Steel) with 3 1 or 2 (Concrete) with 3	1:1.33 ft ²

Note: All Insulation shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: One ply of BASEGARD SA, self-adhered while maintaining minimum 3" side laps.

Ply Sheet: (Optional) One or more plies of SBS Base, Ply IV, Ply VI, SBS Poly Base, SBS Smooth or SBS Premium Base fully adhered with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq. while maintaining minimum 3" side laps.
Or
One or more plies of SBS Glass Torch Base or SBS Poly Torch Base heat welded while maintaining minimum 3" side laps.



Membrane:

One ply of SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Cap, SBS Cap UltraWhite, SBS Premium, SBS Premium FR, or SBS Premium FR UltraWhite fully bonded with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq. while maintaining minimum 3" side laps.

Or

One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite SBS Premium FR Torch, SBS Premium FR Torch UltraWhite while maintaining 3" side laps.

**Maximum Design
Pressure:**

-75 psf. (See General Limitation #7)

Membrane Type: SBS

Deck Type 7I: Recover, Insulated

Deck Description: Min. 22 ga. steel deck with supports at a maximum 6ft o.c. or concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 240 lbf when tested with Firestone All-Purpose fasteners in accordance with TAS 105.

System Type C(11): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

<u>Base or Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISO 95+GL Minimum: 2" thick	4 (Steel) with 3 1or 2 (Concrete) with 3	1:2.67 ft ²
ISOGARD HD Composite Minimum 1½" thick	4 (Steel) with 3 1or 2 (Concrete) with 3	1:2.67 ft ²
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	4 (Steel) with 3 1or 2 (Concrete) with 3	1:2.67 ft ²

Note: Insulation shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: One ply of BASEGARD SA, self-adhered while maintaining minimum 3" side laps.

Ply Sheet: (Optional) One or more plies of SBS Base, Ply IV, Ply VI, SBS Poly Base, SBS Smooth or SBS Premium Base fully adhered with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq. while maintaining minimum 3" side laps.
Or
One or more plies of SBS Glass Torch Base or SBS Poly Torch Base heat welded while maintaining minimum 3" side laps.



Membrane: One ply of SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Cap, SBS Cap UltraWhite, SBS Premium, SBS Premium FR, or SBS Premium FR UltraWhite fully bonded with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq. while maintaining minimum 3” side laps.
Or
One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite SBS Premium FR Torch, SBS Premium FR Torch UltraWhite while maintaining 3” side laps.

Maximum Design Pressure: -45 psf. (See General Limitation #7)

Membrane Type: SBS

Deck Type 7I: Recover, Insulated

Deck Description: ¹⁹/₃₂" or greater plywood or wood plank, fastened with 0.113" x 2³/₈" ring shank nails at maximum 6" o.c. to supports at maximum 24" o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 267 lbf when tested with Firestone All-Purpose fasteners in accordance with TAS 105.

System Type C(12): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

<u>Top or Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
RESISTA Minimum: 1½" thick	4 with 3	1:1.78 ft ²
SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	4 with 3	1:1.78 ft ²

Note: Top Layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: One ply of BASEGARD SA self-adhered with 3" side laps.

Ply Sheet: (Optional) One or more plies of SBS Glass Torch Base or SBS Poly Torch Base heat welded, Or
One or more plies of SBS Base, Ply IV, Ply VI, SBS Poly Base, SBS Smooth or SBS Premium Base fully bonded with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq.

Membrane: One ply of Firestone SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite heat welded,
Or
One ply of SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Cap, SBS Cap UltraWhite, SBS Premium, SBS Smooth SBS Premium FR, or SBS Premium FR UltraWhite fully adhered with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq.

Maximum Design Pressure: -75 psf. (See General Limitation #7)



Membrane Type: SBS/APP

Deck Type 7I: Recover, Insulated

Deck Description: Min. 22 ga. steel deck with supports at a maximum 6ft o.c. or concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 320 lbf when tested with Firestone All-Purpose fasteners in accordance with TAS 105.

System Type (13): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

<u>Base or Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISOGARD HD Composite Minimum 1½" thick	4 (Steel) with 3 1or 2 (Concrete) with 3	1:2.67 ft ²

Note: All Insulation shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: One ply of BASEGARD SA, self-adhered while maintaining minimum 3" side laps.

Ply Sheet: (Optional) One or more plies of SBS Base, Ply IV, Ply VI, SBS Poly Base, SBS Smooth or SBS Premium Base fully adhered with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq. while maintaining minimum 3" side laps.
Or
One or more plies of SBS Glass Torch Base or SBS Poly Torch Base heat welded while maintaining minimum 3" side laps.

Membrane: One ply of SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Cap, SBS Cap UltraWhite, SBS Premium, SBS Premium FR, or SBS Premium FR UltraWhite fully bonded with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq. while maintaining minimum 3" side laps.
Or
One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite SBS Premium FR Torch, SBS Premium FR Torch UltraWhite while maintaining 3" side laps.

Maximum Design Pressure: -60 psf. (See General Limitation #7)



Membrane Type: SBS/APP

Deck Type 7I: Recover, Insulated

Deck Description: Min. 22 ga. steel deck with supports at a maximum 6ft o.c. or concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 140 lbf when tested with Firestone All-Purpose fasteners in accordance with TAS 105.

System Type(C14): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

<u>Base Insulation Layer (Optional)</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISO 95+ GL, RESISTA Minimum 1" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISOGARD HD Minimum 1/2" thick	4 (Steel) with 3 1 or 2 (Concrete) with 3	1:1.33 ft ²
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	4 (Steel) with 3 1 or 2 (Concrete) with 3	1:1.33 ft ²
RESISTA Minimum 1" thick	4 (Steel) with 3 1 or 2 (Concrete) with 3	1:1.33 ft ²

Note: All Insulation shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: One ply of BASEGARD SA, self-adhered while maintaining minimum 3" side laps.

Ply Sheet: (Optional) One or more plies of SBS Base, Ply IV, Ply VI, SBS Poly Base, SBS Smooth or SBS Premium Base fully adhered with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq. while maintaining minimum 3" side laps.
Or
One or more plies of SBS Glass Torch Base or SBS Poly Torch Base heat welded while maintaining minimum 3" side laps.



Membrane:

One ply of SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Cap, SBS Cap UltraWhite, SBS Premium, SBS Premium FR, or SBS Premium FR UltraWhite fully bonded with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq. while maintaining minimum 3" side laps.

Or

One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite SBS Premium FR Torch, SBS Premium FR Torch UltraWhite while maintaining 3" side laps.

Maximum Design**Pressure:**

-52.5 psf. (See General Limitation #7)



Membrane Type: SBS/APP

Deck Type 7I: Recover, Insulated

Deck Description: Min. 22 ga. steel deck with supports at a maximum 6ft o.c. or concrete. The existing roof shall be a minimum 1" in total thickness. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 240 lbf when tested with Firestone All-Purpose fasteners in accordance with TAS 105.

System Type (C15): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

<u>Base Insulation Layer (Optional)</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISO 95+ GL, RESISTA Minimum 1/2" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	4 (Steel) with 3 1 or 2 (Concrete) with 3	1:1.78 ft ²

Note: All Insulation shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: One ply of BASEGARD SA, self-adhered while maintaining minimum 3" side laps.

Ply Sheet: (Optional) One or more plies of SBS Base, Ply IV, Ply VI, SBS Poly Base, SBS Smooth or SBS Premium Base fully adhered with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq. while maintaining minimum 3" side laps.
Or
One or more plies of SBS Glass Torch Base or SBS Poly Torch Base heat welded while maintaining minimum 3" side laps.

Membrane: One ply of SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Cap, SBS Cap UltraWhite, SBS Premium, SBS Premium FR, or SBS Premium FR UltraWhite fully bonded with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq. while maintaining minimum 3" side laps.
Or
One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite SBS Premium FR Torch, SBS Premium FR Torch UltraWhite while maintaining 3" side laps.

Maximum Design Pressure: -67.5 psf. (See General Limitation #7)



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Membrane Type: SBS/APP

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga. steel deck with supports at a maximum 6ft o.c. or concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 213 lbf when tested with Firestone All-Purpose fasteners in accordance with TAS 105.

System Type (C16): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

<u>Base Insulation Layer (Optional)</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISO 95+ GL Minimum ½” thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISO 95+ GL, RESISTA, ISOGARD HD Composite Minimum 1½” thick	4 (Steel) with 3 1 or 2 (Concrete) with 3	1:1.78 ft ²

Note: All Insulation shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: One ply of BASEGARD SA, self-adhered while maintaining minimum 3” side laps.

Ply Sheet: (Optional) One or more plies of SBS Base, Ply IV, Ply VI, SBS Poly Base, SBS Smooth or SBS Premium Base fully adhered with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq. while maintaining minimum 3” side laps.
Or
One or more plies of SBS Glass Torch Base or SBS Poly Torch Base heat welded while maintaining minimum 3” side laps.

Membrane: One ply of SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Cap, SBS Cap UltraWhite, SBS Premium, SBS Premium FR, or SBS Premium FR UltraWhite fully bonded with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq. while maintaining minimum 3” side laps.
Or
One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite SBS Premium FR Torch, SBS Premium FR Torch UltraWhite while maintaining 3” side laps.

Maximum Design Pressure: -60 psf. (See General Limitation #7)



Membrane Type: SBS

Deck Type 7I: Recover, Insulated

Deck Description: Min. 22 ga. steel deck with supports at a maximum 6ft o.c. or concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 478 lbf when tested with Firestone Heavy-Duty fasteners in accordance with TAS 105.

System Type D(1): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

<u>Base or Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISO 95+ GL, RESISTA, ISOGARD HD Composite Minimum 1½” thick	N/A	N/A
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ½” thick	N/A	N/A

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of SBS PolyBase mechanically fastened through the insulation with Firestone Heavy-Duty fasteners and Coiled Metal Batten Strip spaced 18" o.c. at the lminimum 3" side laps.

Ply Sheet: One ply of BASEGARD SA self-adhered to base sheet with minimum 3” side laps.

Membrane: One ply of SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Cap, SBS Cap UltraWhite, SBS Premium, SBS Premium FR, or SBS Premium FR UltraWhite fully bonded with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq. while maintaining minimum 3” side laps.
Or
One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite SBS Premium FR Torch, SBS Premium FR Torch UltraWhite while maintaining 3” side laps.

Maximum Design Pressure: -52.5 psf (See General Limitation #7.)



Membrane Type: SBS/APP

Deck Type 7I: Recover, Insulated

Deck Description: Min. 22 ga. steel deck with supports at a maximum 6ft o.c. or concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 120 lbf when tested with Firestone All-Purpose fasteners in accordance with TAS 105.

System Type D(2): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

<u>Base Insulation Layer (Optional)</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISO 95+ GL, RESISTA Minimum ½” thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISO 95+ GL, RESISTA Minimum 1” thick	N/A	N/A
ISOGARD HD Composite Minimum 1½” thick	N/A	N/A
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ¼” thick	N/A	N/A

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of SBS Base mechanically fastened through the insulation with Firestone All-Purpose fasteners or Firestone Heavy-Duty or Firestone Concrete Drive (concrete only) and Firestone Insulation Fastening Plates spaced 12" o.c. at the minimum 3.4" side laps and 12" o.c. in two staggered rows in the field of the roll.

Ply Sheet: One ply of BASEGARD SA self-adhered to base sheet with minimum 3” side laps.

Membrane:

One ply of SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Cap, SBS Cap UltraWhite, SBS Premium, SBS Premium FR, or SBS Premium FR UltraWhite fully bonded with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq. while maintaining minimum 3" side laps.

Or

One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite SBS Premium FR Torch, SBS Premium FR Torch UltraWhite while maintaining 3" side laps.

**Maximum Design
Pressure:**

-60 psf (See General Limitation #7.)



Membrane Type:	SBS
Deck Type 7:	Recover, Non-Insulated
Deck Description:	¹⁹ / ₃₂ " or greater plywood or wood plank, fastened with 0.113" x 2 ³ / ₈ " ring shank nails at maximum 6" o.c. to supports at maximum 24" o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 61 lbf when tested with 12 ga. ring shank nails in accordance with TAS 105.
System Type E(1):	Membrane attached over existing roof system.
All General and System Limitations apply.	
Base Sheet:	One ply of MB Base mechanically fastened into deck with minimum 12 ga. " ring shanks nails and minimum 32 ga., 1- ⁵ / ₈ " tin tabs spaced 9" o.c. at the 2" side laps and 9" o.c. in three staggered rows in the field of the roll.
Ply Sheet:	One ply of BASEGARD SA self-adhered to base sheet with minimum 3" side laps.
Membrane:	One ply of Firestone SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite heat welded, Or One ply of SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Cap, SBS Cap UltraWhite, SBS Premium, SBS Smooth SBS Premium FR, or SBS Premium FR UltraWhite fully adhered with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq.
Maximum Design Pressure:	-52.5 psf (See General Limitation #7.)



Membrane Type: SBS

Deck Type 7: Recover, Non-Insulated

Deck Description: ¹⁹/₃₂" or greater plywood or wood plank, fastened with 0.113" x 2³/₈" ring shank nails at maximum 6" o.c. to supports at maximum 24" o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 156 lbf when tested with Firestone All-Purpose fasteners in accordance with TAS 105.

System Type E(2): Membrane attached over existing roof system.

All General and System Limitations apply.

Base Sheet: One ply of MB Base mechanically fastened into deck with All-Purpose Fasteners and Insulation Fastening Plates spaced 12" o.c. at the 2" wide side laps and 12" o.c. in two staggered rows in the field of the roll.

Ply Sheet: One ply of BASEGARD SA self-adhered with minimum 3" side laps

Membrane: One ply of Firestone SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite heat welded,
Or
One ply of SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Cap, SBS Cap UltraWhite, SBS Premium, SBS Smooth SBS Premium FR, or SBS Premium FR UltraWhite fully adhered with hot asphalt adhesive applied within the EVT range and at a rate of 25-30 lbs./sq.

Maximum Design Pressure: -75 psf (See General Limitation #7.)



RECOVER SYSTEM LIMITATIONS:

1. All System Limitations and General Limitations shall apply. See specific deck type Notice of Acceptance for deck type System Limitations.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance, refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each sidelap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq.

Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.

5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant. **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform with Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 61G20-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE